

DE1300

**Rugged DAQ
ADC Module
8 CH 52 kS/s**

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1. Description

DE1300 Rugged DAQ ADC Module 8 CH 52 kS/s allows user to digitize up to eight single ended analog signals.

Key features:

- Eight single ended input channels
- 24-bit simultaneous sampling on each channel
- 52734 S/s sampling rate per channel
- Programmable with DE1100 controller module

DE1300 Rugged DAQ ADC Module 8 CH 52 kS/s is compatible with MIL-STD-461, MIL-STD-704E, MIL-STD-810G Change 1, and RTCA DO-160 standards..

Areas of application:

- Data acquisition
- Vibration monitoring
- Signal processing
- Real time signal monitoring

2. Hardware Overview

2.1. Circuitry

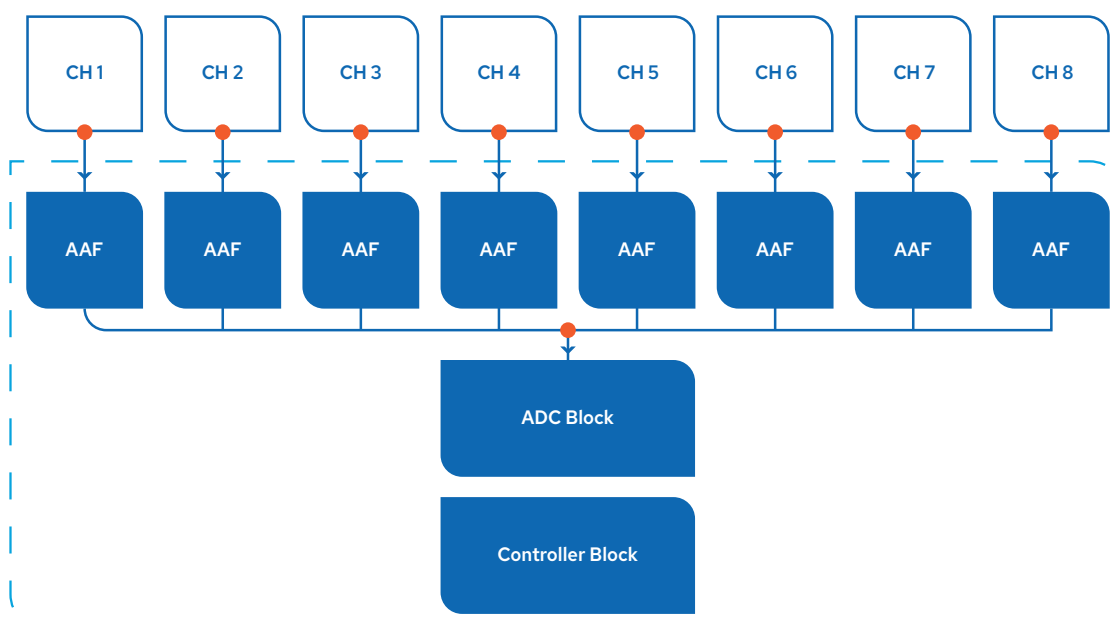


Figure 1: Block Diagram of DE1300

2.2. Hardware Specifications

2.2.1. Electrical

Specification	Minimum	Typical	Maximum	Notes
Input Current (5.4 V)	200 mA	—	1 A	—
Input Current (+/-15 V)	200 mA	—	1 A	—
Input Current (+/-12 V)	20 mA	—	1 A	—
Analog Input Channel	—	8	—	—
Analog Filter Poles	—	10	—	—
Analog Filter Cutoff -3 dB (Low Pass)	—	10 kHz	—	—
Analog Filter Cutoff -3 dB (High Pass)	—	2 Hz	—	—
Analog Input Voltage Range	-2.5 V	—	+2.5 V	Input signals beyond +/-5 V may damage circuitry
Access Rate	—	—	50 Mbps	—
Sample Rate	—	—	52734 S/s	—
Resolution	—	24-bit	—	—

2.2.2. Physical

Specification	Minimum	Typical
Front Panel Connector	DSUB-50	MPN: M24308/23-29Z

2.2.3. Environmental

Specification	Condition	Value
Operating Temperature	-	-40 °C - +45 °C

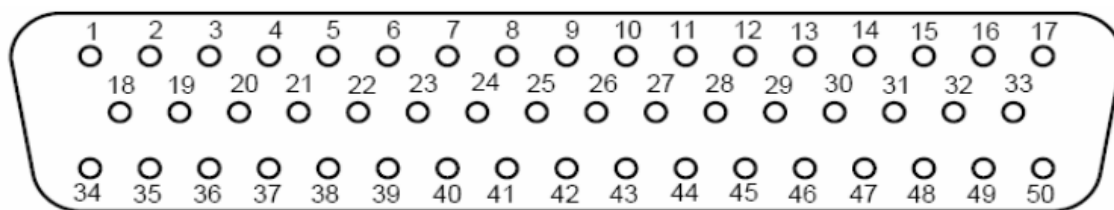
3. Signal Connections

3.1. J1 Connector Pinout

Table 1: J1 Connector Pin Assignments

DSUB Pin Number	Signal Name
1	CH1
2	GND
3	CH2
4	GND
5	CH3
6	GND
7	CH4
8	GND
9	CH5
10	GND
11	CH6
12	GND
13	CH7
14	GND
15	CH8
16	GND
17	NC
18	GND
19	NC
20	GND
21	GND
22	GND
23	GND

DSUB Pin Number	Signal Name
24	GND
25	GND
26	GND
27	GND
28	GND
29	GND
30	GND
31	GND
32	GND
33	GND
34	NC
35	GND
36	GND
37	GND
38	GND
39	GND
40	GND
41	GND
42	GND
43	GND
44	GND
45	GND
46	GND
47	GND
48	GND
49	GND
50	NC



4. Safety Guidelines



Caution

The DE1300 must not be operated in any manner not specified in this document. Misuse of the product may create a hazardous situation. The safety protection incorporated into the product can be compromised if it is damaged. In case of damage, the product should be returned for repair.

5. Electromagnetic Compatibility Guidelines

This product has been tested and found to comply with the applicable regulatory requirements and limits for electromagnetic compatibility (EMC). These requirements and limits are designed to provide reasonable protection against harmful interference when the product is operated within its intended electromagnetic environment.

The product is intended to be used in industrial locations. However, harmful interference may still be caused in certain installations, particularly when connected to peripheral devices or test objects, or when operated in residential or commercial environments. To reduce the potential for radio and television interference and to avoid unacceptable degradation in performance, the product must be installed and used strictly in accordance with the instructions provided in the documentation.

In addition, any changes or modifications to the product that are not expressly approved by DEICO are not permitted and could void the user's authority to operate the equipment under applicable regulatory provisions.



This product shall be operated only with shielded cables and accessories to ensure the specified EMC performance.

Caution